SF Microclimates API

License MIT API Free to use

Real weather for 50 San Francisco neighborhoods. Free API. No key required.

🌐 **Live API:** microclimates.solofounders.com

Use with Claude Code, Clawdbot, or build into your apps.

Built by Solo Founders.

Why This Exists

SF has the most dramatic microclimates of any US city.

Weather apps say "San Francisco: 58°F" — but that's useless. It can be 52°F and foggy in the Outer Sunset while it's 65°F and sunny in the Mission, just 3 miles apart.

This API aggregates 150+ outdoor sensors and groups them by neighborhood, so you get *actual* local temperatures — not some airport reading from SFO.

Try It Instantly

```
curl https://microclimates.solofounders.com/sf-weather/mission
```


```
{
  "neighborhood": "mission",
  "name": "Mission District",
  "temp_f": 58,
  "humidity": 52,
```

```
  "sensor_count": 8
}
```

No API key. No signup. Just use it.

Add to Claude Code or Clawdbot

Create a skill file to give your AI agent hyperlocal SF weather awareness:

```
# SF Microclimates Skill

Get real-time SF neighborhood weather.

## Triggers
- "weather in [neighborhood]"
- "sf weather mission vs sunset"
- "is it foggy in the richmond?"

## Usage
curl https://microclimates.solofounders.com/sf-weather/marina

## Neighborhoods
mission, castro, marina, soma, haight, noe_valley,
outer_sunset, inner_sunset, outer_richmond, presidio,
north_beach, pacific_heights, potrero, twin_peaks...
```

Use Cases

- **AI agents** — Give your agent real local weather context
- **Home automation** — Trigger based on your actual neighborhood temp
- **Slack/Discord bots** — Settle "is it foggy?" arguments
- **Travel apps** — Show tourists what to actually expect
- **Personal dashboards** — Finally, weather that matches your window

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Endpoints

Endpoint	Description
`GET /sf-weather`	All 50 neighborhoods
`GET /sf-weather/:neighborhood`	Single neighborhood
`GET /neighborhoods`	List all available

50 Neighborhoods

From Marina to Noe Valley, Presidio to Twin Peaks — every SF neighborhood mapped.

```
curl https://microclimates.solofounders.com/neighborhoods
```

Includes: `mission`, `castro`, `marina`, `soma`, `haight`, `noe_valley`, `outer_sunset`, `inner_richmond`, `north_beach`, `pacific_heights`, `potrero`, `dogpatch`, `bayview`, `twin_peaks`, `presidio`, `tenderloin`, `chinatown`, `japantown`, `cole_valley`, `glen_park`, and 30 more.

Response Format

Single Neighborhood

```
{
  "updated": "2026-01-25T23:00:00.000Z",
  "neighborhood": "outer_sunset",
  "name": "Outer Sunset",
  "temp_f": 52,
  "humidity": 78,
  "sensor_count": 15
}
```

All Neighborhoods

```
{
  "updated": "2026-01-25T23:00:00.000Z",
  "neighborhoods": {
    "mission": { "temp_f": 58, "humidity": 52, "sensor_count": 8 },
    "outer_sunset": { "temp_f": 52, "humidity": 78, "sensor_count": 15 },
    "marina": { "temp_f": 55, "humidity": 65, "sensor_count": 6 }
  }
}
```

Self-Hosting

Want to run your own instance?

1. Clone & Install

```
git clone https://github.com/solo-founders/sf-microclimates.git
cd sf-microclimates
npm install
```

2. Get a PurpleAir API Key

This API uses PurpleAir sensors. Sign up at develop.purpleair.com — free for personal use.

3. Create KV Namespace

```
wrangler kv:namespace create "CACHE"
```

Add the output to `wrangler.toml`:

```
[[kv_namespaces]]
binding = "CACHE"
id = "your-kv-namespace-id"
```

4. Set Your API Key

```
wrangler secret put PURPLEAIR_API_KEY
```

5. Deploy

```
wrangler deploy
```

Local Development

```
echo "PURPLEAIR_API_KEY=your-key" > .dev.vars
wrangler dev
```

Configuration

Variable	Default	Description
`CACHE_TTL_SECONDS`	`3600`	Cache duration (1 hour)
`RATE_LIMIT_PER_MINUTE`	`60`	Max requests per IP

How It Works

1. Request comes in → rate limit check
2. Check Cloudflare KV cache → return if fresh
3. Cache miss → fetch outdoor sensors from PurpleAir (`location_type=0`)
4. Group sensors by neighborhood GPS bounding boxes
5. Calculate averages, cache for 1 hour
6. Return JSON with CORS headers

Fork for Your City

LA, Seattle, NYC, Chicago, Austin — every city has microclimates.

The neighborhood bounding boxes are in `src/index.ts`. To adapt:

1. Update `SF_NEIGHBORHOODS` with your city's areas + GPS coordinates
2. Change the PurpleAir bounding box to your city
3. Update branding
4. Deploy

PRs welcome! We'd love to see `la-microclimates`, `nyc-microclimates`, etc.

Credits

- Sensor data: PurpleAir
- Infrastructure: Cloudflare Workers
- Built by: Solo Founders

License

MIT — use it however you want.